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MODERN SURGERY OF SEROUS CAVITIES.*

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Medication of any kind being of but little value in causing exudation of any kind in any cavity to become absorbed, prompts me to deal with this subject strictly from a surgical point of view. I wish, however, to state that it is only in syphilitic effusion that we have any evidence that medication is beneficial.

With the aid of the exploring needle there should be no doubt as to the presence of any kind of fluid in any cavity, even when existing within the cranial or spinal column.

The fluid is generally sero-fibrinous containing floculi, with or without blood or pus.

The pericardium usually does not contain these two elements.

Exudation of serous membranes are simple in their character and the lesion may be circumscribed or general.

An abnormal amount of fluid of any character, if allowed to remain in any cavity for any length of time, is accomplished or followed by unfavorable results.

Any serous membrane may slough as the result of prolonged distension. The pressure of a fluid in a cavity, especially upon the brain, heart and lungs, is sooner or later disastrous, and in tubercular subjects no hope can be given without a paracentesis.

Drainage of the ventricles, the arachnoid, pleural, pericardial, peritoneal and synovial cavities, is now an established surgical procedure.

While the brain has a most wonderful amount of tolerance, it suffers more than all other tissues as the result of pressure because of its being encased in bone.

This is the greatest reason for immediate interference and the evacuation of any excessive amount of fluid that may accumulate around or within it, as the result of either acute or chronic meningitis.

The results are the same whether the pressure is from within or upon the surface of the brain.

Chronic meningitis—The causes are:

1. Acute meningitis.
2. Tumors.
3. Exudation into the ventricles.

We find the disease confined principally to the lateral ventricles, although the third or fourth may be involved.

The amount of fluid may be as much as 34 ounces with a specific gravity of 1004 to 1006, and containing a slight amount of albumen, with the appearance of colorless serum.

The insertion of a canula into the ventricles, the outer end being just beneath the integument which has healed primarily, and thus allowing an opportunity for the fluid from the ventricles to become absorbed subcutaneously, was an ingenuous method, and while not followed by recovery, shows something of new formed ideas.

The bulging of the scalp increased with the amount of the fluid secreted, it becoming necessary in a few days to remove the canula, and thus allow the fluid to escape.

Another introduced a small canula into the ventricle, so that by means of a small covering over the opening the fluid could be allowed to escape at any particular time.

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Constant drainage early in the course of the disease will, I am quite sure, be the means of solving this problem.

For surely the environments are more favorable at this time than when the ventricular walls have been allowed to become greatly distended.

In case of effusion into the ventricle the arachnoid cavity may or may not become involved—generally not.

Their association seems to be more assured in children of tubercular, syphilitic or alcoholic parents.

Abnormal adhesions, which are so disastrous to life, can, I believe, be avoided by means of free drainage.

Acute meningitis is one of four forms, viz.:

1. Simple.
2. Tubercular.
3. Purulent.
4. Hemorrhagic.

In speaking of meningitis I wish to include both the cerebral and spinal meninges—the pathological conditions and surgical treatment being about the same.

The causes are:

1. Trauma.
2. Exposure to extremes of temperature.
3. Excessive mental labor.
4. The various constiutional diseases.
5. Diseases of the cranial bone.
6. Abscesses, cysts and tumors.
7. Pachchionian bodies.

The disease may be general, limited to the convexity or the base of the brain, but confined to the pia.

Dr. Francis Minot gives three-fold indications for treatment.

1. To prevent or arrest inflammation.
2. To modify its violence and shorten its duration.
3. To place the patient in the best condition to withstand the violence of the disease, and to recover from its effects.

In simple meningitis we find a condition that has been recognized only from a medical standpoint, surely not surgical.

We have been taught that the exudation may be caused to become absorbed by one or more of the various drugs.

We find a high mortality; perhaps higher than in any of the acute diseases, while the majority of cases that recover suffer some impairment of mind or of the nervous system.

The diagnosis of simple meningitis is one of the most difficult to make, and is always to be differentiated from the tubercular form, which is surely one of the most fatal diseases.

With all of these facts standing out so prominently before us would it not be well for the medical profession to consider something more radical in the way of treatment than has heretofore been presented?

A recent personal experience leads me to most earnestly advocate some surgical interference that will relieve intracranial pressure as the result of serous exudation therein contained, and not rely upon medication to bring about absorption, for surely we have but little evidence that such can be produced.

The time to do this is at the onset of pressure symptoms, and not after the tissues have been subjected to prolonged distension or compression. The fluid contained within the arachnoid cavity is easily reached and evacuated.

My experience and observation lead me to say that prompt surgical interference, by way of removing this fluid, will prevent many cases from dying.

I am informed by responsible parties that the operation recently performed in one of the German cities has resulted in recovery.

There is much more to be hoped for in the simple form of this disease than in the other three if the simple form ever exists.

Tubercular meningitis is not definitely understood; there seems to be some question as to whether it exists as a primary disease. Whether it does or not I think I am safe in saying that all cases terminate fatally.

This is a deplorable state of affairs, and one that justifies the most radical measures for its relief.

I believe that tubercular bacilli may exist within the cranium independently of any other part of the body; that is, they may be found there without being found elsewhere.

However all this may be, free drainage of the arachnoid meninges is a rational procedure. This may be accomplished by one or more perforations of the cranium and the dura.

I cannot speak from personal experience in this matter, but I shall avail myself of the first opportunity to determine the results of such an operation in this disease.

Purulent meningitis has been dealt with from purely a surgical standpoint, as the causes come within the domain of surgery, being

1. Diseased bone.
2. Fracture of the cranial bones.
3. Perforation of the cranium by injury or operation.

This condition is usually due to diseased bone and is more often met with than generally supposed.

No person should question the propriety of doing anything that is necessary to remove pus from the cranial cavity, regardless of what the cause may be.

I read a paper before the Cincinnati Medical Society on November 2, 1891, upon this subject, reporting six cases as the result of acute middle ear trouble. I, at this time, most earnestly advised any immediate surgical interference by which the pus could be evacuated. Mr. Murray (British Medical Journal, January 5, 1895, p. 9), reports three consecutive cases operated upon for the relief of abscess, followed by recovery, as the result of acute inflammation of the middle ear.

Hemorrhagic meningitis.—This condition has thus far never been detected, except by post mortem.

Its causes are not yet understood. The remoteness of its causes, and its detection impossible by any physical sense, warrants an exploratory incision. While the disease is very infrequent, it might seem that such a procedure is less justifiable; however, the treatment of hemorrhagic meningitis is yet to be determined.

Pericarditis.—Causes:

1. Septicemia.
2. Trauma.
3. Inflammation of adjacent tissues.

The seriousness of this trouble depends upon the amount of exudation which contains blood and pus.

If the cavity becomes filled to such a degree as to interfere with the movement of the heart, the consequences, as a rule, are permanent, and in a majority of cases immediately disastrous.

The absence of pain is one of the greatest indications of a large amount of fluid within the pericardeum, and one of the greatest dangers accompanying the presence of this fluid are adhesions which cause the greatest cardiac disturbances, and are usually followed by hypertrophy or dilatation.

If the ordinary physical senses do not indicate the presence of fluid, an exploring needle is indicated. If fluid is present the withdrawal of the needle should be followed by a larger one, as often as is found necessary to keep the fluid within the normal amount. The time requires usually from two to five days. In this way circulation is guarded, obstacles avoided and the patient tided over a most serious part of the disease. For in this as in any other acute disease we may say that it is self-limited if properly cared for.

It is taken for granted that this operation should be done, as all others should be, with aseptic precautions.

Pleurisy.—This is a very common condition, and one in which the necessity of removing the fluid was first recognized; consequently there has been more surgical work done in this cavity than in any other, except it be the peritoneal.

The fluid may be fibro-serous or purulent, each being acute or chronic. The presence of fluid may be due to inflammation, cardiac, renal or hepatic diseases, perforation of the lung or other abscesses. It is more easily determined and more easily removed, the question being as to its character.

There should, however, be no question as to whether or not it should

be removed, regardless of its character.

As long as we have no means of preventing the secretion of fluid, we must necessarily depend upon two ways of removing, one by absorption and the other by operative means.

The exudation into the pleura is a simple process, and, of itself, without danger, and if the fluid is not allowed to accumulate, we are as sure of recovery as the stoker is that his fire will burn if the ashes are not allowed to become banked.

But if excessive accumulation occurs and is allowed to be prolonged, we must expect the vitality of the patients to run on a low ebb, as the result of all things that follow pain, indigestion, loss of sleep and non-oxygenation of the blood.

No person would hesitate to remove the fluid in chronic pleurisy from any cause. By so doing, sleep and the prolongation of life are assured.

A recent case has been the means and perhaps has done more in convincing me that fluids should be at once removed in both the acute and chronic forms.

Within 190 days 51 asperations were made, 26 on one side and 25 upon the other, averaging one quart at each sitting, the total amount being 51 quarts within 190 days, or one quart every four days. This, however, was the result of aortic stenosis.

My experience with acute inflammation of the pleura has been equally satisfactory, and I say without hesitation that an abnormal amount of fluid, whether serous or purulent, should be removed as soon as detected and as often as necessary to keep it within the normal amount.

If, after a thorough and impartial trial, relief has not been assured by means of the asperator, drainage should be resorted to by the removal of a section of one or more ribs, as the case may require.

The foregoing statements apply to patients of any age.

Synovitis—We have here the most common of all the inflammations of serous cavities.

When we consider the great number of articulations within the human body, and each articulation possessing synovial membrane, this statement, I do not believe, will be questioned.

Each joint is subject, at some time, to irritation of more or less severity. This is always followed by more or less exudation, and as there is not now an articulation which does not come within the domain of surgery, much more is hoped for in their treatment. It is surprising to see with what limited resources surgeons have availed themselves of in this department. Like the mines of gold and silver, the most available have been the first attacked.

This is why the surgery has been limited to the larger and more available articulations. The surgeon, however, is not excused from performing his duty in removing fluid from the most remote synovial sacks.

The causes are the same in this as in any of the other serous exudations, trauma, perhaps, being the most frequent.

I believe, however, that tuberculosis is responsible for the destruction of a greater number of articulations than all the other causes combined.

It is gratifying to know that a great amount of fear in this work has been dispelled, and that both surgeons and physicians, as well, are becoming courageous and more willing to assume responsibility in removing fluid from synovial cavities.

Teno synovitis is similar and the treatment should be the same. In addition the sack should be removed, if possible.

Pernacetesis of a joint of any size in any locality should not be denied a sufferer, no difference what the character of the fluid may be.

It is a matter of judgment on the part of the operator as to the means or the frequency with which it should be done, and any physician should be capable of doing it promptly and without fear. There is far more danger in allowing the fluid to remain than there is in its evacuation by skilled hands, and the after condition of the patient better than

if the pain had been relieved by some narcotic.

Pain, in acute inflammation of serous cavities, indicates the use of an asperator, and not a narcotic.

In conclusion I would say:

1. That pain is not always indicative of a large amount of exudation.
2. The presence of a large amount of fluid is not always accompanied by a rise in temperature.
3. That there are no means of determining the character of the fluid without exploration.
4. The use of an exploring needle is the only means of positively determining the presence of fluid.
5. The temperature is sometimes subnormal.
6. The fluid should not be allowed to reach above normal in quantity.
7. It should be removed as often as necessary to keep it within the normal amount.
8. Open drainage should be made in all cases of tubercular fluid, even though it be within the spinal canal, by means of the lumbar puncture.
9. That surgical anesthesia is not necessary in case of cerebral meningitis.
10. That the probabilities are that the irrigation of serous cavities may aid much in effecting a permanent cure.
11. That the cause of an exudation should, so far as possible, be removed.
12. That the general condition of the patient should be cared for in this, as in all other debilitated conditions.
13. That there is everything to gain and nothing to lose in draining these cavities where the fluid is tubercular.
14. That narcotics in any form are contra-indicated, absorption less likely to occur with them than without them.
15. That the irritation of the serous membrane by a needle, as has recently been suggested, may be worthy of profound consideration.
16. That antiphthisine (Von Ruck) may prove itself one of the most valuable means in treating tubercular serous cavities without mixed infection.

PHILADELPHIA ACADEMY OF SURGERY.

STATED MEETING, APRIL 1, 1895.

Dr. Thomas G. Morton presented two recent adult cases, illustrating

EXCISION OF THE ASTRAGALUS FOR INVETERATE EQUINO-VARUS.

Gentlemen: I have on several occasions presented to the society the results following excision of the astragalus for the rectification of equino-varus, congenital or acquired, but I do not remember that we have had before us, as yet, the results after such operations upon adults.

The first case I show you was brought to the Orthopedic Hospital by Dr. Wentz, of Scranton, on February 28, 1895. He is 22 years of age; the left lower extremity was found to be fairly well developed, but the ankle was weak, and the foot was "flat;" the right limb presented very great atrophy in its entire extent, and the foot was exceedingly rigid and in the position of equino-varus; the patient walked on the dorsum; the astragalus was dislocated forward, as is usual in such cases. The great wasting of one limb and the partial feebleness in the other seemed to indicate the malady was not congenital, but as a result of an early attack of infantile paralysis.

The operation was performed March 3 and consisted in dividing the tendo Achillis, tibialis anticus, the flexor tendons of all the toes, and the plantar fascia; the excision of the astragalus and a portion of the scaphoid, which hindered a perfect right-angle position of the foot; the foot was then carefully dressed and placed upon a right angle tin splint; the wound closed by primary union, and at the end of three weeks a well-fitting shoe and brace was substituted—good ankle motion has been secured.

Case 2 is also a male, aged 22 years, who was sent from Osceola, Pa., to the Orthopedic Hospital and admitted March 13 and operated upon the following day. The deformity was inveterate equino-varus, and

probably congenital. The case was almost identical with the one just presented, and the same operation was performed. It is now only 16 days since, and the wound, it will be observed, has united, and the ankle shows good but not voluntary motion. The position of the foot is normal.

I thought it might be of interest to the Fellows of the Academy to see these recent cases, one being a month, and the other only 16 days after the operation.

DISCUSSION.

Dr. J. Ewing Mears: Do the articulations give any trouble after the operation?

Dr. Morton: I have not seen bad consequences after any of my operations, and I have done the operation in a large number of cases.

Dr. Mears: It is interesting to know that synovitis does not occur, as the operation involves a number of the articulations of the tarsus.

Dr. Morton: I did not have synovitis in a single case, and generally there is no rise in temperature or any evidence of reaction.

Dr. Henry Wharton: Is not the plantar fascia a very great bar to the correction of the deformity, and is it not necessary to divide it in many cases?

Dr. Morton: Yes; in every case in my experience.

Dr. Wharton: It has been my experience also that the plantar fascia is a bar to the correction of the deformity and has to be divided. I have had a number of cases of equino-varus in children and found excision of the astragalus the only thing to be done in these inveterate cases. The results obtained are so much better and are more permanent than by the old method of simply dividing tendons. It has been particularly useful in the case of children of 10 or 12 years of age, where the operation of division of tendons has been done or repeatedly done in infancy, without removing the deformity. In such cases there is nothing to be done but to divide the tendons and fascia and excise the astragalus.

Professor John H. Brinton presented a specimen consisting of a

LARGE OXALIC ACID CALCULUS TAKEN FROM THE HUMAN BLADDER.

I exhibit here a rather large vesical oxalate-of-lime calculus which I removed several months ago at my clinic at the Jefferson College Hospital. The patient was a German, 46 years of age, a blacksmith from the interior of the State. He had had symptoms of stone for 25 years. I made a longitudinal incision into the bladder by the supra-pubic operation and attempted to remove the stone, but found that it was impossible to do so until I had enlarged the bladder opening by a crucial incision. I did this in order to avoid injuring the peritoneum. I then removed this spherical oxalate stone, fully two-and-a-half inches in diameter, and which weighed six ounces when taken out. It is the largest oxalate calculus that I know of in this city. It is so hard that when I took it to a lapidary he tried to cut it with a circular saw; but abandoned it, as he said it would injure his wheel. The surface of this stone is studded with small prominences containing minute brilliant crystals which look like diamonds. The surface is quite rough. It is noteworthy in that the patient carried the stone for 25 years and that it gave him comparatively little trouble. In fact, he did not complain of great pain, but said that he knew he had a stone because he could feel it, through the abdomen, with his fingers. The man went home at the expiration of four weeks, having recovered without any bad symptoms.

DISCUSSION.

The President: The remarks of Dr. Brinton remind me of a case which occurred some years ago. I was making a post-mortem examination of an elderly Quaker gentleman who had been for many years a patient of Dr. Wistar. We examined the various organs, and finally we opened the urinary bladder, in which we discovered a large calculus, which must have been growing for many years, and yet it had not given

rise to any pain or annoyance, for, if it had, he would have spoken of it to Dr. Wistar, who had been his physician during this time. He apparently had no symptoms of bladder trouble, or none of any consequence.

Dr. Brinton: It is hard to understand why a large stone like this would cause so little pain. There must have been a time when the stone was juvenile and much smaller, and should have caused pain, but the patient said that it had not given him any great trouble, and that he had continued to work at his trade until coming to this city for operation.

Dr. Wharton: Large stones do not give as much trouble as small ones. I remember a case of a child whom I operated upon some years ago, who had stone in the bladder and suffered very much from pain and tenesmus, with hemorrhage from the nose, and he also had sub-conjunctival hemorrhages during micturition. In this case the stone that caused so much disturbance only weighed thirteen and a half grains.

Dr. J. M. Barton: Most of the pain in cases of stone in the bladder is owing to the attempt of the patient to empty the bladder, the stone obstructs the urethral opening, acts as a ball-valve and stops the current of urine. The patient continues the pressure, but the ball-valve will not allow the water to escape from the bladder, and the increased pressure leads to enlargement of the muscular bundles and to hypertrophy of the middle coat of the bladder. When the stone gets larger it is less apt to act as a ball-valve, and may give less trouble. The extreme roughness of this stone would prevent its acting as a ball-valve and would account for the absence of pain.

Dr. Mears: I agree in the opinions expressed that small stones give the most trouble and also in the explanation just given by Dr. Barton of the cause of the pain. Some years ago I was called to see a patient who had great trouble in micturition and suffered great pain from stone in the bladder. I removed the stone and found it the size of an almond kernel, although it had caused a good deal of pain and hemorrhage. The stone presented to-night is certainly very interesting. It is of interest to inquire how this stone has grown. Was the stone encysted?

Dr. Brinton: No; it was not. The bladder was thickened and contracted around, so that there was not much cavity beside that occupied by the stone. The patient had constant dribbling of urine, because the bladder could not hold any water. The mucous membrane, from pressure on the irregular surface of the stone, presented a very bad and reticulated appearance from chronic inflammation.

Dr. Mears: The man performed very active work at his trade as a blacksmith, which would probably change the position of the stone and keep it from becoming encysted.

Dr. Thomas S. K. Morton: Why did he have incontinence of urine?

Dr. Brinton: I suppose because there was so little cavity in the bladder to hold water. The stone occupied too much space.

The President: It was strange that a stone of this weight did not cause ulceration and ulcerate its way out of the bladder into the rectum or perineum.

Dr. Brinton: There was suppuration, and the bladder looked and felt so ragged when I took out the stone that I made an unfavorable prognosis. But he did very well after the operation, and I kept him in bed a week longer than usual to prevent any ill result. He had a muscular abdomen, not very fat, probably owing to his blacksmith work. In reply to the President, I would state that no marked bowel symptoms were complained of in this case.

Dr. John H. Brinton made some remarks

OF THE USE OF ESMARCH'S HEMOSTATIC BANDAGE.

Gentlemen: The few remarks I have to make on the subject do not rise to the dignity of a paper; I simply wish to bring to the consideration of the Academy some objections to, or dangers from, the use of Esmarch's bandage as a constricting and controlling band. I have used the

elastic bandage for many years, and I have had several cases in which the results were not altogether satisfactory.

For instance, a number of years ago I operated at my clinic upon a woman who suffered from some serious bone disease of her leg. The Esmarch bandage was applied from the foot to the lower thigh, and the constricting band (the india-rubber tubing first in vogue) was placed just above the knee by a skillful hospital colleague, now deceased. There was no bleeding during the operation. The bandage had been applied and the operation was begun with the leg semi-flexed upon the thigh, but during the operation the limb was extended. After the operation was finished I found that the constricting band had deeply divided the muscular tissues, posteriorly, almost to the bone. The large vessels and nerves were not injured. This damage resulted, not from the direct constricting force or pressure, but from the tearing of the tissues, firmly fixed above, by the extension of the leg during the operation. I was much annoyed by the accident, and dreaded the results. The patient, however, made a very good recovery; but the incident made a deep impression upon my mind.

In this connection, I ask if any injurious effects of a similar kind have ever been noticed by the Fellows of the Academy from the movement of the limb after the constricting band had been applied? Of course, we all know that the first roller should not be applied too tightly over an ulcerating surface or a tumor, for fear of driving morbid material from the affected spot into the general circulation. There is another point about which I would like to ask the experience of the Academy. It is in relation to the Esmarch bandage and secondary hemorrhage. A few weeks ago I made use of the Esmarch on a case of amputation at the knee-joint. This is an amputation that I had done many times during our late war, and had then often noticed a tendency to consecutive secondary hemorrhage. In the two cases upon whom I did this amputation about a month ago I found a troublesome hemorrhage coming on about six hours afterward. I operated about 2 o'clock, and was called about 8 o'clock on account of bleeding. It was not in either case a free hemorrhage, but rather a persistent oozing from tissues which did not bleed at the time of operation. It came from the superior articular branches, and not from the azygos or inferior articular vessels, as the popliteal artery had been divided on the line of the articulation above their usual origin. I was obliged to open the stump and apply eight or ten ligatures to arrest the hemorrhage. I am unable to tell whether this hemorrhage was produced indirectly by the rubber-constricting band or whether it resulted from some peculiarity of the case. It is possible that the band may have exerted undue pressure on the smaller vessels, producing vasomotor paresis, impairing their contractile power, and so have favored a post-operative enlargement, and a consequent reactionary or consecutive bleeding.

In our old war times I have participated in many amputations at the knee, and I am certain that I have often noticed this tendency to consecutive hemorrhage. My object in bringing up this subject was to ask if any Fellow of the Academy has at any time observed any evil effects from the constricting band of the Esmarch apparatus, and also whether secondary hemorrhage may not be the result of its use.

DISCUSSION.

Dr. H. R. Wharton: I would ask if Dr. Brinton has noticed any difference as regards hemorrhage when the roller is applied first and the constricting band second and when the constricting band is used alone?

Dr. Brinton: I have always used the first method, and cannot, therefore, answer from my own experience.

Dr. Wharton: I think that there is always more hemorrhage after applying the elastic bandage, followed by the elastic strap, than by simply applying the strap. I think that there is a likelihood that the band is ap-

plied too tightly in many instances. The secret is in applying it with just sufficient force to do no damage, and simply to temporarily control the circulation. I have seen no cases injured by the use of the Esmarch tube or strap, but think its use is likely to produce more consecutive hemorrhage.

Owing to a death from consecutive hemorrhage after the use of the Esmarch bandage a number of years ago, we have not, at the Children's Hospital, for many years used the Esmarch bandage or strap in cases of excision of the knee-joint. The most satisfactory use of the Esmarch bandage is for operations upon bone, for necrosis or caries. Another use for the Esmarch is in searching for foreign bodies, such as needles, etc., in the tissues, the search can be made with so much more comfort and with a greater chance of finding the foreign body if we first apply the Esmarch bandage and render the parts perfectly bloodless.

Dr. W. Barton Hopkins: I can fully corroborate the statement regarding the risk of applying the circular turns of Esmarch too tightly, as I have for several years been in the habit of demonstrating the immense constricting force which these turns are capable of exerting. By drawing each turn with the utmost tension around a bit of white pine wood a decided crease may be made in it, fully demonstrating its power and giving an object lesson which is not easily forgotten.

Dr. Joseph Hearn: The Esmarch is generally applied too tightly. It is not necessary to use so much force. I can make a part bloodless simply by the application of my hand. My experience has been limited with secondary hemorrhage, as I have had no secondary hemorrhage. I apply the Esmarch very lightly, and always apply it myself. I only apply ligatures to the larger vessels, and have never had occasion to open a stump for secondary hemorrhage.

Dr. Barton: I have nothing to add to what has been said, except that in cases of resection for ununited fracture I have found the Esmarch bandage unsuited, on account of the large amount of blood thrown out afterward. In operating for ununited fracture of the humerus I would not use the Esmarch bandage, as I have had to remove the permanent plaster dressings for this cause.

Dr. Mears: I was so much impressed with the harmful effects of the tube of the Esmarch apparatus that I substituted for it a flat rubber band, and reported its use in two operations in the Philadelphia Medical Times, August 15, 1874. I have seen a number of evil effects from the application of the tube, such as paralysis from pressure upon the nerves. I always use the band in preference to the tube, as being less injurious.

Dr. William H. Taylor: I have seen the Esmarch bandage applied too tightly, and have myself been very careful in this respect. In excision of the knee I have usually done without the roller bandage, and have used a wide band for the purpose of constriction. In all these cases there is a good deal of oozing, and after excision of the knee this oozing is decidedly increased by the use of the bandage.

Dr. Thomas S. K. Morton: With regard to the Esmarch roller bandage, I seldom use it any more for operations on the extremities, having had demonstrated to me, when in Glasgow, by Mr. Macewen, his method of making the limb bloodless. By elevating the limb for a few minutes we observe after a time that a spasm of the bloodvessels occurs and the limb becomes bloodless, and then the constricting band can be applied. With regard to the application of the bandage I do not intrust this to an assistant, but always apply it myself. I always use the narrow strap and not the tube. I take this opportunity of saying that the Esmarch apparatus, as sent out by the instrument makers, is usually defective, because the bandage is too narrow; it should be wider. With regard to the paralysis following the application of the constricting band, it is most liable to occur when it is used just above the knee or elbow, and especially the latter, on account of the course of the musculospiral nerve. This occurs so

frequently that we should prohibit the use of the Esmarch bandage around or above the joints.

Dr. Brinton: As a matter of historic record and justice, I wish to say in regard to Dr. Morton's description of the method of making a limb bloodless, as practiced by Macewen, that this method probably antedates the present day. I saw it practiced many years ago at the Jefferson College by the late Professor Joseph Pancoast.

The President: I also remember seeing Dr. Pancoast applying a broad bandage to a limb in order to reduce the amount of blood in it, and take off the bandage before the operation. This was long before the Esmarch bandage was used.

Dr. Thomas S. K. Morton: I think that I have been misunderstood. There was no bandage applied by Macewen; he simply elevated the limb and produced a contraction of the arterioles, which made the limb bloodless before applying the strap.

The President: It is very remarkable in Dr. Brinton's case that the tissues were divided. Were the muscles cut or only the skin?

Dr. Brinton: The skin was torn slightly at one point and the muscles were distinctly cut through. I have not seen this accident mentioned in treatises on surgery, but in the American Text-Book of Surgery it is stated that there should not be any motion of the limb after the band has been put on.

The President: I have done very many operations upon the knee, but no amputations at the knee-joint since the war. I have not, in many years, had any secondary hemorrhage.

Dr. Wharton: I have recently seen very little secondary hemorrhage. I had a case of reamputation of the leg last summer, where I had to apply the Esmarch bandage where consecutive hemorrhage occurred, and I had to open the stump and tie the vessels. I have not noticed any special liability to hemorrhage after operations at the knee-joints.

The President: In amputating at the knee, did Dr. Brinton remove the condyles or leave them?

Dr. Brinton: I referred rather loosely to these amputations as "at the knee." In each case I sawed off a portion of the condyles, if necessary, to bring the flaps together, but there was not any hemorrhage from the bone.

The President: What was the nature of the injury or disease?

Dr. Brinton: Both were cases of sarcoma.

Dr. T. S. K. Morton: Might not that have been the cause of the hemorrhage? I have noticed that in cases of operation for sarcoma there was much more tendency to bleeding than in ordinary amputations for injury. The vessels are often enlarged.

Dr. Brinton: The vessels did not appear enlarged.

Dr. Hopkins: I have not seen any hemorrhage, except after sloughing.

Dr. Hearn: I have not had any experience of this kind, and never have opened a stump for hemorrhage.

Dr. Brinton: I might say, to correct a possible misapprehension, that, although I have of late years done many amputations, these are the only two in which secondary hemorrhage occurred.

A SPECIAL FOOTBALL LESION.

Maag (Hospitals Tiende) has frequently met with subpatellar bursitis in football players, and regards this as a special lesion, which he attributes to violent and repeated contraction of the quadriceps femoris muscle in kicking the ball. Rovsing, in an abstract of this paper (Cent. f. Chir., No. 16, 1895) is inclined to attribute the bursitis rather to effusion of blood into the bursal sac.

DEATH FROM ANTITOXIN.

An infant 2 years and 3 months old died in New York from blood poisoning, the result of an injection of antitoxin. Dr. Samuel Kerr made out the death certificate, in which he stated that the injection caused the condition producing death. The Board of Health refused to accept the certificate, and Deputy Coroner Weston was ordered to perform an autopsy. The injection was not given by the board. This is the first death in New York from antitoxin.

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PHILADELPHIA, JUNE 22, 1895.

SUTURE OF THE HEART.

Del Vecchio (Rif. Med., April 4th, 5th, 1895), as the results of experiments on dogs, concludes that suture of the heart in cases of wound is possible. At the recent congress in Rome (1894) he showed a dog whose left ventricle had been wounded in two places (one penetrating into the ventricular cavity), forty days previously. The author had sutured the two wounds with catgut and silk, and the dog appeared at the time of exhibition to be in perfect health; it was killed on the forty-second day after suture. The apex of the heart was found firmly adherent to the thoracic parietes. Both wounds were firmly healed, and in one the scar could be seen on the endocardium, proving the penetration. An interrupted suture was found to answer better than a double continuous suture, as necrosis generally followed the use of the latter. Dogs present a special difficulty in these experiments, inasmuch as one has to open the pleural cavity to reach the heart. In cases of wound of the human heart, Del Vecchio proposes the following operative procedure: Two longitudinal incisions to be made from the lower border of the third rib to the upper border of the seventh, the one along the lower margin of the sternum, the other 5 to 10mm. inside the nipple line; these incisions to be joined by a horizontal one made in the fourth intercostal space. The fourth, fifth and sixth ribs and cartilages to be divided, and the outer cutaneous flaps turned up. The pleura to be separated and pushed on one side with the finger, exposing the pericardium, which is incised longitudinally. The wound is then united by interrupted sutures. Death in cases of wound of the heart seems to be chiefly due to pressure from the blood effused into the pericardial sac. Since this pressure is also a check to further hemorrhage, it is a nice question whether operative interference may not do more harm than good, as far as the hemorrhage is concerned. Paracentesis may, however, be practiced, to be followed, if necessary, by free incision of the pericardium. A short bibliography of the subject is appended. Fischer collected 376 cases of heart wound with a mortality (two to three minutes after injury) of 20 cent. Death has been noted in periods varying from a few seconds to nine months after the injury.

THE UNCONTROLLABLE VOMITING OF PREGNANCY.

The last volume of the Transactions of the American Gynecological Society contains an interesting paper by Dr. Edward P. Davis, of Philadelphia, on this subject, with a report of three fatal cases. The paper itself and the discussion upon it show clearly the difficulty that often arises in coming to a conclusion whether it is necessary or not to induce abortion. Two of the patients whose cases are recorded by Dr. Davis apparently died undelivered; in the

third the uterus was emptied artificially, but the patient died shortly afterwards. There are various local therapeutic measures short of interfering with the pregnancy that appear to have been attended with success. Among these may be mentioned elevating and supporting the uterus, either by means of a pessary or by means of tampons, the application of caustics such as chromic acid to the vaginal portion of the cervix or cervical canal, and scarification of the cervix, though having regard to the weak state of the patient in bad cases the loss of even a small quantity of blood is not a matter of indifference. A measure that must be regarded as more severe, inasmuch as it involves a risk of terminating the pregnancy when such a step has not been deliberately intended, is a moderate dilatation of the cervix. In addition to local treatment, Dr. Palmer Dudley, of New York, speaks highly of half-grain doses of cocaine and three-grain doses of monobromate of camphor internally. It must be remembered that even the induction of abortion will not necessarily save the patient if interference is too long deferred. Among symptoms that should suggest the necessity of emptying the uterus are especially the presence of coffee-ground material in the vomit, substernal pain and distress, with marked anemia and emaciation. Yet every obstetrician of experience knows how unaccountably, even when the patient seems in a bad way, sudden improvement may set in, the vomiting ceasing and normal delivery taking place at term. When the symptoms that have been mentioned are well marked, it is better, however, to occasionally interfere unnecessarily rather than take the risk of deferring interference till too late. A therapeutic measure of some clinical value is to impress on the patient that the induction of abortion will be necessary if the vomiting does not cease or diminish by a certain time—three days, for instance. In some such cases, and especially if the patient objects to the operation, an immediate improvement may be observed.

DIGITOXIN.

Wenzel, of Unverricht's Clinic (Centralbl. f. inn. Med., May 11, 1895), draws attention to the value of digitoxin (Merck's), which is the most active principle of digitalis. He has treated with it 9 patients—3 with valvular disease, 3 with myocarditis, and 3 with nephritis. In 1 of these cases the treatment had to be repeated after an interval, and in two others it was adopted on three separate occasions. In addition three other patients suffering from other incurable disease, as well as cardiac complications, were also treated with digitoxin. In most cases the patients were desperately ill with disturbed compensation, engorgement of the pulmonary circulation, and marked diminution in the urine. When possible the patients were not treated for twenty-four to thirty-six hours after admission. The drug was always administered by clyster; 15 g. of the following solution —digitoxin 0.01, alcohol 10, aq. dest. ad 200—was administered by the rectum in 100 g. of lukewarm water, at first thrice, then twice, and lastly once daily. The single dose thus given was 0.00075 digitoxin. Only in two cases was an unpleasant result noted—namely, vomiting—and this soon ceased. The author gives details of 12 cases. The duration of treatment and the effects on the breathing, pulse, quantity and specific gravity of the urine, as well as on the amount of albumen present, were carefully noted. The author never had negative results, the patients responding more or less promptly to the digitoxin. It was successfully used in cases of valvular disease and myocarditis, even when other remedies, including digitalis, had been tried in vain. The pulse became stronger and less frequent. The cyanosis and dyspnea promptly and surely disappeared, and the diuretic action of the remedy was very marked. This method of administering digitoxin reduces to a minimum any disturbance of the alimentary canal. The prompt results obtained by the above-mentioned doses suggest that even smaller ones might be efficient.

THE GERM THEORY.

"Gallaird (Med. Moderne, April 20, 1895) relates a case under his care in which a large suppurating cyst of the liver was opened and drained. The pus, examined microscopically, was found to contain hooklets and pneumococci, without any other microbe. The patient was not then suffering, nor had he ever suffered, from pneumonia."

The above occurs in the British Medical Journal for June 1, 1895.

We always have supposed the germ theorists believed that suppuration could only take place under the influence of the staphylococcus pyogenus or special pus producing germ. Here we have a germ, existing in a suppurating cyst of the liver, which has no relation to suppuration in the general sense, inasmuch as resolution may take place in pneumonia without suppuration.

Does this not illustrate our position in relation to germs that they exist only because favorable media are developed?

Electro-Therapeutics.

IN CHARGE OF
DR. S. H. MONELL, New York.

SOME PHASES OF IMPROVEMENT.

Under this caption Dr. W. H. King recently makes some remarks of interest which are worth repeating.

Medical electricity needs a good many phases of improvement yet, and needs to have the practical knowledge of improvements far more widely disseminated among the profession. Take the whole matter of electro-therapy—the best of it—as it is understood to-day by a few, and advance general practitioners everywhere to an equal understanding of the theory and practice of medical and surgical electricity, this broad sweep of knowledge would without question represent the most important therapeutic development that is in sight. It would mark an era in therapeutics greater than the discovery of any drug whatever—greater than any drug ever did or ever can mark, with the possible exception of the discoverey of anasthesia. At the past rate of progress, however, it may take about half-way to the millennium for the mass of physicians to catch up to the facts that are known now.

Dr. King's reflections are as follows: "In looking over a number of old electrical appliances and batteries which I have collected for the past 15 years—some I once used and some have collected for curiosity sake—I was struck by the great change which had come over the construction.

I say construction, for with one or two exceptions there is no new principle involved. (New principles are scarce in mechanics.—Ed.) These old batteries may be divided into two classes: First, those which were good for nothing, and second, those which were worse than useless. It is easy for one to look back at the mistakes and fallacies of past generations and, with a patronizing air, pity their ignorance, but so rapid has been the change that I am forced to shudder when I think that I actually used many of these instruments of torture and was enthusiastic in their praise. Such experience makes one almost lose confidence in himself as well as things in general. It is not fair to suppose that in 15 years more we will look back at our present staus with very much the same feelings as we now look at those of 15 years ago. If we deny this we must deny progression.

Of the first-class, those which were good for nothing may be mentioned the old pocket batteries, especially the pocket galvanic batteries, the one-cell galvanic battery used for electrolysis, and the old elctric belts of the Pulvermacher type, which were largely used by physicians at one time.

Of the second class stands first the old galvanic batteries which lacked facilities to regulate the current strength, and which were so unsteady in their action that they changed in intensity almost from minute to minute, of which fact we were ignorant, owing to the lack of a milli-

amperemeter. The old form of a magneto-electric battery, which was either strong enough to twist the patient all out of shape or was not strong enough to be felt at all, was undoubtedly the most vicious instrument of any.

"The faradic batteries, the coils of which were wound irrespective of the length or size of wire, and with a vibrator which changed from the key of E to G, and back again every other second, perhaps stood next in the category of the old magneto-electric. Yet, who will not say that the older electro-therapeutists did not have success? Did they not discover most of the laws of electro-physiology and lay the foundation of the whole subject, and with these very crude and, to us, unsatisfactory instruments? Now, are we, with all our improved apparatus, making as great advancement in electro-physiology and electro-therapy? Of the former it is safe to say that we are not, but of the latter it is just as safe to say that we are surpassing them.

"Is it because the subject of electro-physiology has been exhausted that we have not kept pace with our former workers in this field? Not so; but it is due to the age in which we live. This is above all a practical age in medicine, or, in other words, it is a therapeutic age. Never has there been a period in medicine in which there have been made such radical changes in therapeutics, and so many of them, as in recent years.

"The same tendency is prevalent in electro-therapeutics, and the principal advancement made along that line. The time will come again when physiological research will return, and I venture to assert that electro-physiology will not be lacking; and with the improvements in our facilities for such experiments we will undoubtedly surpass all former reasearches of like nature."

Dr. King states that this is a therapeutic age. It ought to be. It ought to be an age of wise, safe, rapid progress in the field of medicine, in which the opportunities for advancement are so great. A good deal of energy is expended, but some of it must be deflected from the true course, for it excites too much notice in the lay press. Clinical tests of the curative properties of a drug should be properly conducted in suitable institutions in the manner which experience approves. To first exploit a wonderful new discovery in the daily papers—herald it abroad as if already time-tried and valuable, and then apply it indiscriminately in general and private practice, only to find it either useless, or dangerous, or both, is misdirected therapeutic activity. The bright, illustrated weekly "Life," of February 7, takes notice of this tendency of the times in the following way. In a ring, decorated with skulls, appears a "Death Warrant," duly signed and sealed in legal form, and beside it is this paragraph:

"Number 978,403,214.

"The other day we read of another operation for appendicitis, in which the victim failed to recover. This was natural and to be expected, particularly if the real trouble lay in his lungs or brain. No up-to-date doctor can afford to fail in detecting a clear case of appendicitis occasionally. In this case we are informed that 'it is the opinion of the doctors that the patient would have had no chance of living without an operation.'

"This is, indeed, a surprise,

"And how unlike a doctor!

"From what we know of these gentlemen we should expect them to say: 'Our diagnosis was wrong. The operation may have been a mistake, and he might have recovered without it.'"

Directly underneath the above is another paragraph, equally sarcastic in its tone:

"Why is it that physicians who are supposed to work on scientific lines are so liable to go off at half-cock?

"It now appears that antitoxin, their latest fad, is dying of diphtheria. It has had a dangerous little life, but will soon be lying in the ash barrel along with Koch's lymph, Brown-Sequard's elixir and similar wonders."

It is humiliating to reflect that these comments are justified, and

that the occasion for them is avoidable. Premature publicity works much evil in therapeutic research, where unknown and dangerous drugs are concerned, but if physicians would take up the therapeutic development of medical electricity and get all there is out of it, they would be on safe ground and do a power of good. In this field the line of danger is well ascertained, and can be avoided by all operators. Pioneer investigators have proven beyond all doubt that in certain forms of electric currents we have valuable remedial agents. The soil has been no more than scratched on the surface, and needs but the delving of intelligent workers to bring forth the greatest therapeutic harvest known in our age.

It is rather remarkable that so enormous a majority of physicians (there are said to 118,000 in the United States) should almost wholly neglect to cultivate this excellent addition to their armamentarium.

The average physician will read with interest an article extolling some experimental proprietary preparation and mentally determine to send for a sample and give it a trial; but he will glance heedlessly at the headlines of such rare papers on electro-therapeutics as stray into medical journals at long intervals without considering that the subject matter concerns him in any way. As a matter of fact there is no branch of therapeutic investigation which a practical physician in any department of medicine can pursue to better advantage. All the knowledge of bacteriology extant will not help him to prescribe better, or add anything to the curative properties of iron, arsenic, quinine, the iodides, etc.; but a fair acquaintance with the uses of a good galvanic and faradic battery, to say nothing of the electro-cautery and static machine, will add not less than 25 per cent. to his effectiveness as a doctor. It is gratifying to know that medical colleges are beginning to teach some of the necessary rudiments, and that post-graduate instruction in electro-therapeutics may now be obtained in a number of localities. The day should speedily come when every graduate of a reputable medical college should be as fully informed upon the subject of electricity as he is upon opium, belladonna, strychnine and saline cathartics. To accomplish this a revolution must be brought about through the creation of a general demand for such information. In this campaign of education leading medical journals could play a very important part.

RIP VAN WINKLE SPEAKS.

"Editor ——, I forgot whether it was the W—— or some other publication which proposed the question of the value in general practice of galvanic *versus* faradic batteries. I wish some bright country practitioner who has either would give maker, price, number of opportunities for use in course of the year, class of cases in which he has tried it, and the general results.

J. H. G——, M.D.,
Springfield, Mass."

This is a staggerer! I find it in an estimable medical journal (May 1895) published in the same city as the Times and Register, and it deserves to be reprinted in entire *italics*.

Galvanic vs. faradic! Bright country practitioner who has either!! Maker!!! Opportunities for use in course of a year!!!! General results——!!

Phew! This is too sudden, too searching and is likely to find everybody too unprepared to make a thoroughly satisfactory reply.

Ad interim I would enquire, "Where are all the makers? Why do they hide their light under a bushel and conceal all knowledge of their wares from any except a spry country practitioner who will not be baffled?" Where is the American Association of Electro-Therapeutics? Where has the able editor of the Medical W—— been all these late years, that he has kept his subscribers in the dark on one of the most luminous medical subjects of the day? And where, may I ask, has Dr. J. H. G—— secluded himself meanwhile? Such a letter could not be written except by a man whose comprehension of the subject of medical electricity (not "*galvanic vs.*

aradic batteries") was absolutely *nil.* Can such a man be a modern, progressive physician? Why does this ignorance exist?

Think of its existing in Springfield, Mass. !! Shade of the sacred cod fish on Boston's State House! Why does Massachusetts compel a hustling doctor to send to Philadelphia to launch out a national drag net for bright country practitioners who may, peradventure "have either,' and be able to shed light on the dark, deep secret as to who makes "either" battery, and what he charges for so doing. Has Massachusetts no copy of the International System of Electro-Therapeutics to send to benighted Springfield? *If not, she can obtain one in Philadelphia.*

Surgery.

IN CHARGE OF
DR. T. H. MANLEY, New York.

THE SURGICAL TREATMENT OF EXOPHTHALMIC GOITRE.

Dr. Tuffier gives an interesting account of a case where surgical interference caused complete disappearance of all symptoms of the disease, which had resisted all other kinds of therapeutic treatment. The patient was a young woman aged 27, who had suffered with the malady for seven years, and its beginning was marked by a cystic enlargement of the right lobe of the thyroid gland, which was soon accompanied by severe exophthalmos and the other usual symptoms. Iodine injections, tapping, and electrical treatment were all tried in vain, and the patient became so ill that she could not work, and, in addition, showed signs of distress from the pressure which the enlarged thyroid gland was producing on the trachae. It was then decided to perform partial thyroidectomy, and this was succesfully accomplished, with the result that the general symptoms rapidly disappeared, the woman now being in good health and able to work. The exophthalmos also almost entirely disappeared, and no other unpleasant symptoms have followed. Dr. Tuffier believes the success of the operation to lie in partial removal of the gland, which he thinks gives better results, both immediate and future, than complete extirpation of the organ.—Lancet.

THE INJECTION OF BLOOD SERUM IN CANCER.

Immunized blood serum is rapidly coming into favor in the treatment of cancer. Two German physicians, Professor Emmerich and Scholl, report a number of cases so treated, all being recurrent.

Their efforts in all cases were rewarded by singular success. What variety of cancer is amenable to such treatment?

They answer that it is unimportant that "what counts most is the duration of the disease."

In recent cancer they promise a prompt and definite cure; the tumor being quickly resorbed. In chronic cancer, while seropathy will not eliminate the disease it will arrest its ravages, the tumefaction, infiltration and grangrenous invasion.

They designate the fluid "Klebs serum;" i. e., cancer serum. They have employed sheep, mostly on which the virulent cultures are first grafted. For a large neoplasm they inject about the circumference of it, from 10 to 25 centigrammes or more. In general it produces no febrile excitement, or insecutive constitutional disturbances; in all cases the general condition of the patient rapidly improves.—Annales de Med.

RELATION BETWEEN PLEURISY AND TUBERCULOSIS.

BY M. EICHORST, of Zurich.

This author claims that more than two-thirds of all cases of pleurisy are of a tubercular origin. He grounds the opinion on his experiments, which he made by injecting the pleuritic serum into healthy animals. In 23 experiments 15 animals became quickly affected.—Annales de Med.

THE SUBCUTANEOUS EMPLOYMENT OF FOWLER'S SOLUTION.

Dr. Kessing has employed with great advantage Fowler's solution in many cases in which it was badly borne by the stomach.

He used one part of the solution with two of sterilized water; the integument before hand being cautiously cleansed with suds and ether.

In 60 injections he had no abscesses. He always injected into the pectoral muscle or the fore arm. M. Popoff likewise reports most gratifying results from this line of therapy in malaria. He employed one gramme in each injection. It always acts with more energy in this manner. Drosdow, Mosler and Kobner employ the hypodermic method of using Fowler's solution in divers cases. In order to diminish its irritating action they mixed with each charge a few drops of carbolic solution, 1.40; or cocaine, 1-100—Annales de Med.

A RARE LESION OF THE PERINEUM DURING COITUS.

Professor Fenomenoff (Jour. Obst.) cites the following case: Mrs. T. presented herself complaining of sterility and incontinence of fecal gas, pain during intercourse, reflex neuralgias and cephalgia. Before marriage she enjoyed good health. Her husband, a man of powerful physique, was 25 years old at marriage. Her first intercourse had been attended with great pain and much loss of blood. After marriage this was repeated several times a day; always with great pain. Her husband complained of difficulty and dissatisfaction in the accomplishment of the act. For five years the woman patiently bore up with this pain, when she consulted a physician, who made a digital examination and prescribed medicines, all without any relief. When Fenomenoff examined her he found the vagina entirely intact, the ostium hermetically closed by an unbroken hymen; the penis had entered just above the fourchette, crushing through the mucous membrane and making a false passage through the recto-vaginal space. Now an operation was performed, the hymen cut away and the passage closed in the perineum. She made a prompt recovery and soon was pregnant.—Annales de Med.

OPERATIONS ON BILIARY PASSAGES.

Tuffier (Societe de Chirurgie, May 15, 1895) reported 14 operations on the biliary passages. On one occasion while doing an operation on the right kidney he discovered how it was possible to reach the common bile duct by a lumbar incision.

He further, later, made several lumbar cholodectomies. This route, he declared, was possible and had the advantage of being outside the peritoneum. By it one could readily reach the duodenal orifice of the bile duct, explore the duodenum and the pancreas. The external incision in this operation is similar to that for a nephrectomy, but a little higher. Segoud admitted the possibility of reaching the bile canal by this way, but believed the vena cava was endangered.

Michaux did not believe that this line of penetration was practicable on the living. M. Routier had found anterior cholodectomy attended with great difficulties, when there were adhesions between the intestine and liver. Frequently he had observed Winslowe's foramen entirely obliterated by a false membrane.—Le Progres. Med., May 18, 1895.

BONE SUTURE IN FRACTURE OF THE LOWER END OF THE FEMUR.

Walther (Med. Mod., April 20, 1895) reports a case in which the lower extremity of the femur was broken into three fragments, and the tibia was displaced backwards, carrying one fragment—the inner condyle—with it. The joint was freely exposed and the fragments reduced and sutured in position; 12 months later the knee seemed rather large; functionally the result is perfect. The joint can be flexed to a right angle.

A CONTRIBUTION TO THE STUDY OF ORBITAL-SYPHILITIC OSTITIS.

BY A. BEAUDOUNET (These de Paris.)

The author tells us that specific perostitis of the orbit is not a common affection, yet it occurs more frequently than is generally supposed. There are two varieties, the acute and chronic. The acute simulates a deep-seated abscess in its degree of intensity.

The chronic form is a concomitant of tertiary syphilis, with hereditary type. Its progress is persistent, and its effects destructive. It may simulate an orbital tumor or malignant disease in exophthalmia. Tumefaction of the tissues produces great pressure on the optic and ophthalmic nerves; vision impaired and the suffering great.

The prognosis varies according to its precise seat and chronicity. Medication must be prompt and energetic; local to combat local symptoms and specific to reach the general system.—Revue des. Sciences Med., April, 1895.

SURGICAL TREATMENT OF TUBERCULAR ASCITES.

BY G. FREES, Deutsche Med. Woch., No. 46, 1894.

Since 1888 the author has treated 19 cases of tubercular peritonitis by incision and evacuation. The quantity of fluid removed was from one to 14 litres. In 16 the fluid was transparent; three times, somewhat turbid. He found the peritoneal reflexion of the pelvic organs in females the most frequent site of infection. In three ablation of the ovaries was practiced, though as the disease was diffused it effected no permanent relief.

In operating he employed an incision through median line. This should be of limited extent, and exploration be made entirely by the finger.

He says that it is immaterial whether we drain or not.

His patients' ages varied from 13 to 60 years. There was no immediate mortality attending abdominal section. Six were completely cured —33.3 p. c. Nine died within a year. One died after a year of perfect health. He believes that cure follows these cases by washing away the germs and their toxines, and by thus improving the circulation in the lymphatics and blood vessels by which disintegration and resorption of tubercular products are favored.

TOTAL EXTIRPATION OF THE STOMACH IN THE CAT.

Cyzerny and Kaiser in 1878 practiced the complete extirpation of the stomach of a cat. Carvello and Pachon in the same animal in 1893; Filipi and Monari in 1895.

In the latter instance the cat weighed 2000 grammes at the time of operation; one month later, 1.580. The animal was nourished with milk, farina and the yolk of eggs.

With milk alone the feces were liquid; with mixed diet they were solid. Morsels of bread and meat were equally well digested. Raw meat was not perfectly digested. After eating the animals were easily fatigued. There was no vomiting. Gastrotomy, it would appear from the foregoing, is well borne by the feline tribe.—Goc. Biog., December 15, 1895. Rev. des Sciences, April, 1895.

Miscellany.

PEROXIDE OF HYDROGEN IN WOUND TREATMENT.

Dr. Neudorffer recommends a 2 1-2 per cent. solution of peroxide of peroxide of hydrogen as a hemostatic and disinfectant in the treatment of wounds. Through the action of the hydrogen peroxide the fibrin of the blood is separated in minute microscopic fibres, resulting in a local defebrinization of the blood, whereby the harmless little clots close the wounded surface from the surrounding tissue.

The peroxide of hydrogen solution is applied by means of pledgets of absorbent cotton, which are well pressed, leaving them only damp; in this manner they are applied to the bleeding surface only but a second.

Peroxide of hydrogen, according to Neudorffer, may also be used in severe cases of hemorrhage, as bleeding from the nose, where a simple sponging or wiping of the nasal cavities or passage with a 2 1-2 per cent. solution usually checks the bleeding; or a similar result may be obtained by inhaling the solution five or six times through the nostrils in the form a spray, taking deep inhalations at the time.—Pacific Drug and Phy.

THE UNGRATEFUL COUGH.

Coughs are ungrateful things. You find one out in the cold; you take it up, nurse it, make everything of it, dress it up warm, give it all sorts of balsams, and other food it likes, and carry it around in your bosom as if it were a miniature lapdog. And by and by its little bark grows sharp and savage, and—confound the thing!—you find it is a wolf's whelp that you have got there, and he is gnawing in the breast where he has been nestling so long.—Oliver Wendell Holmes.—New York Medical Record.

SENTENCE OF AN ILLEGAL PRACTITIONER.

F. W. R. Waring, alias Thomas McGahan, was recently sentenced in Yonkers, N. Y., to six months' imprisonment and to pay a fine of $50 for practicing medicine illegally. The man was arrested on the complaint of Dr. E. M. Morrell, secretary of the Westchester County Medical Society. The practice of medicine would appear to have an irrestible attraction for him, for he had already been fined $100 in 1887, and had been sent to Sing Sing in 1889 for the same offense. Quacks who are driven out of New York through the efforts of the New York County Medical Society very often remove to Yonkers and resume their illegal practice there. For this and other reasons it is suggested that a closer union be formed between the New York and the Westchester County Societies, the two oldest county organizations in the State.—New York Medical Record.

Prescriptions.

Trinitrin, or nitroglycerin, has been recommended as an antineuralgic, especially in cases of inveterate sciatica. It can best be given in a 1 per cent. alcoholic solution, of which the dose is about 3 drops per day, or the following formula may be employed:

R—Sol. trinitrinæ (1 per cent.), mlxxv.
Tinct. capsica, dr. iss.
Aq. menth. pip. ad oz. ss.

S.—Five to ten drops in water three times a day.

The following is a favorite mixture for "sluggish liver and indigestion:"

R—Acid. nitro-hydrochlor., dil. mx.
Tinct. podophyllin, mx.
Succ. taraxaci, dr. j.
Tinct. nucis. vom., mx.
Syrup zingiberis, dr. ss.
Aq. menth. pip., ad oz. ss.

S.—In water three times a day.

In the flatulent colic of infants—as, of course, a symptomatic treatment—the following gives excellent results:

R—Extracti zingiberis fluid, dr. iss.
Tinct. asafœtidæ, dr. iii.
Aq. menth. pip.
Aq. cinnamomi, aa oz. j.
Syrup. simplicis, oz. iv.

M. Sig.—One teaspoonful in water three times a day before meals.—The London Pract.

For urticaria Brocq recommends the following pomade:

R—Acid. carbolic., grs. xv.
Ess. menth. pip., mxv.
Zinci oxid., dr. iij.
Lanolin, oz. ss.
Vaselin., ad. oz. ij.

Ft. Ung.

The application of the ointment can be preceded by antipruriginous lotions of chloral or eau-de-Cologne.

In addition he prescribes internally two to ten of the following pills per day:

R—Quinæ hydrochlor., gr. jss.
Ergotin., gr. jss.
Extract. Belladonn., gr. 1-6.

M. ft. Pil. j.

The "pick-me-ups" of the druggist are commonly made up somewhat as follows:

R—Potass. bromid., grs. xv.
Spirit. chlorof., mxx.
Tinct. gentian. co., mx.
Tinct. card. co., mx.
Spirit. amm. aromat., mx.
Elixir simpl., dr. ss.
Aq. menth pip., ad oz. j.

This is the kind of draught dispensed over the counter for the "head" produced by deficient exercise, or by over-eating or drinking.

THE EXTERNAL APPLICATION OF PILOCARPIN IN NEPHRITIS.

Molliere (Lyon Med., April 14, 1895) advocates the treatment of the various forms of Bright's disease by the inunction into the skin of the trunk of a dilute ointment of nitrate of pilocarpin. This method of administering pilcarpin was first suggested and applied, chiefly for affections of the joints, by the author's brother, Daniel Molliere, in 1882. He believed that he in this way secured a purely local diaphoresis with a minimum dose of the alkaloid, and without the inconveniences and dangers (collapse, etc.) which sometimes attend its subcutaneous injection. The modus operandi in cases of Bright's disease is as follows: An ointment is made of nitrate of pilocarpin with white vaseline 1 in 1000 or 2000. About oz. iij of this is rubbed into the skin over the whole of the trunk, which is then enveloped in a thick layer of cotton wool and waxed linen, the whole maintained in place by bandages. This "carapace" may be left on for several hours, or even until the reapplication of the dressing on the following day. In ordinary cases this treatment may be repeated daily for 10 to 15 days. Molliere finds the results of this treatment exceedingly satisfactory, even when, as in his later cases, the usual restriction of diet and other routine treatment have not been combined with the inunction. In acute cases threatened uremia is averted and the dyspnoea is relieved; there is profuse diaphoresis and salivation, increase in the amount of urine, and diminution of albumen, and a rapid disappearance of anasarca. The cure is rapid and complete. In chronic cases he claims that it produces greater alleviation of symptoms and prolongation of life than any other remedy.

METABOLISM IN THYROID TREATMENT.

Denning (Munch. med. Woch., April 23, 1895) has investigated the effects of the thyroid treatment on metabolism. The researches were carried out upon three healthy but obese individuals. In the first case there was a slight increase in the nitrogenous excretion in the urine, but only to the extent of 5 per cent. The amount of urine remained the same. There was loss of weight to the extent of 2 1-2 kg. In the second case there was an increase in the amount of urea, but the amount of urine showed no increase, although a larger amount of fluid had to be allowed during the treatment owing to thirst. In the third case there was only a slight increase in the urea and nitrogenous products. The amount of urine was increased. There was a loss of weight of some 5 kg., but an increase took place later, even when the regulation diet was adhered to. The author thinks that differences exist in different individuals in respect to the effect of thyroid treatment upon metabolism. Sometimes the variations in the individual are considerable, when care is needed. Albuminuria or glycosuria are looked upon as unfavorable effects; the former is rare. The author has also made some similar experiments upon himself. He lost over 3 kg. in weight, and a reducing body appeared in the urine, which at times gave all the reactions of sugar, but it did not deflect the ray of polarized light; under diabetic diet this body disappeared from the urine. There was no thirst and no polyuria. The author thinks that the phenyl-hydrazin test for sugar is too delicate for ordinary purposes. Thyroid treatment requires to be carried out with prudence.—Br. Med. Jour.